



## PATENT ABSTRACTS OF JAPAN

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## (54) DIFFERENTIAL PRESSURE MEASURING EQUIPMENT

## (57) Abstract:

**PURPOSE:** To diagnose the leakage of encapsulated liquid without dismounting a measuring equipment by providing a CPU and a memory, storing an initial zero point output value obtained by equalizing the pressure on the high and low pressure sides, and then comparing it with a zero point output value at the time of self-diagnosis.

**CONSTITUTION:** When a pressure is applied from the high pressure side, the pressure functioning onto a seal diaphragm 13 is transmitted to a silicon diaphragm 8 through an encapsulated liquid 102. When a pressure is applied from low the pressure side, the pressure functioning onto a seal diaphragm 12 is transmitted through an encapsulated liquid 101 to the silicon diaphragm 8. Consequently, the silicon diaphragm 8 is distorted depending on the pressure difference and the distortion is taken out electrically by means of a strain gauge 91 in order to measure the differential

pressure. When self-diagnosis is carried out, the pressure is equalized on the high and low pressure sides 5, 4 and the zero point output value is measured. It is then compared with an initial zero point output value stored in a CPU and a decision is made that the encapsulated liquid has leaked if a threshold value is exceeded. This constitution allows self-diagnosis of leakage without dismounting the equipment.

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